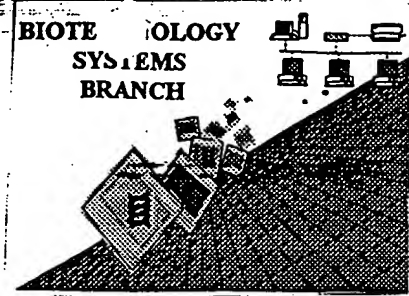_M. Moran_

RAW SEQUENCE LISTING ERROR REPORT

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: _09/472,688 A_

Source: _1631_

Date Processed by STIC: _11-24-00_

RECEIVED
DEC 09 2000
TECH CENTER 1600/2900

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)
PATENTIN 3.0 e-mail help: patin30help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE <u>CHECKER VERSION 3.0 PROGRAM</u>, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.
Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO).
Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

RECEIVED
DEC 11 2000
TECH CENTER 1600/2900

<u>Checker Version 3.0 can be down loaded from the USPTO website at the following address:</u>
http://www.uspto.gov/web/offices/pac/checker

M. Moran

1631

RECEIVED

DEC 09 2000

TECH CENTER 1600/2900

Does Not Comply
Corrected Diskette Needed

See pp. 1-4

```
        RAW SEQUENCE LISTING              DATE: 11/24/2000
        PATENT APPLICATION:  US/09/472,688A    TIME: 15:33:26

        Input Set : A:\ES.txt
        Output Set: N:\CRF3\11242000\I472688A.raw

     4 <110> APPLICANT: Shimkets, Richard A.
     5         Leach, Martin D.
     7 <120> TITLE OF INVENTION: cSingle Nucleotide Polymorphisms for Known Genes
    10 <130> FILE REFERENCE: 15966-534-CIP1
    12 <140> CURRENT APPLICATION NUMBER: 09/472,688A
    13 <141> CURRENT FILING DATE: 1999-12-27
    15 <150> PRIOR APPLICATION NUMBER: 60/109,024
    16 <151> PRIOR FILING DATE: 1998-11-17
    18 <150> PRIOR APPLICATION NUMBER: 09/443,199
    19 <151> PRIOR FILING DATE: 1999-11-16
    21 <150> PRIOR APPLICATION NUMBER: 09/442,129
    22 <151> PRIOR FILING DATE: 1999-11-16
    24 <150> PRIOR APPLICATION NUMBER: 09/442,849
    25 <151> PRIOR FILING DATE: 1999-11-17
    28 <160> NUMBER OF SEQ ID NOS: 880
    30 <170> SOFTWARE: CuraGen Patent Formatter Version 0.9


ERRORED SEQUENCES

    11440 <210> SEQ ID NO: 668
    11441 <211> LENGTH: 14
    11442 <212> TYPE: PRT
    11443 <213> ORGANISM: Homo sapiens
    11445 <220> FEATURE:
    11446 <221> NAME/KEY: VARIANT
    11447 <222> LOCATION: (7)...(0)
    11448 <223> OTHER INFORMATION: cSNP translation
    11450 <400> SEQUENCE: 668
    11451 Cys
E--> 11452 1
    12856 <210> SEQ ID NO: 769
    12857 <211> LENGTH: 14
    12858 <212> TYPE: PRT
    12859 <213> ORGANISM: Homo sapiens
    12861 <220> FEATURE:
    12862 <221> NAME/KEY: VARIANT
    12863 <222> LOCATION: (7)...(0)
    12864 <223> OTHER INFORMATION: cSNP translation
    12866 <400> SEQUENCE: 769
    12867 Gln Ser Val Val Ser Cys Ala
E--> 12868 1                     5
    12954 <210> SEQ ID NO: 776
    12955 <211> LENGTH: 14
    12956 <212> TYPE: PRT
    12957 <213> ORGANISM: Homo sapiens
    12959 <220> FEATURE:
```

Number of amino acids differ:
14 listed
1 shown

Same error
14 listed
7 shown

Same
14 listed
1 shown

```
          RAW SEQUENCE LISTING            DATE: 11/24/2000
          PATENT APPLICATION: US/09/472,688A     TIME: 15:33:28

          Input Set : A:\ES.txt
          Output Set: N:\CRF3\11242000\I472688A.raw

      12960 <221> NAME/KEY: VARIANT
      12961 <222> LOCATION: (7)...(0)
      12962 <223> OTHER INFORMATION: cSNP translation
      12964 <400> SEQUENCE: 776
      12965 Glu
E--> 12966  1
      13990 <210> SEQ ID NO: 850
      13991 <211> LENGTH  14
      13992 <212> TYPE: PRT
      13993 <213> ORGANISM: Homo sapiens
      13995 <220> FEATURE:
      13996 <221> NAME/KEY: VARIANT
      13997 <222> LOCATION: (7)...(0)
      13998 <223> OTHER INFORMATION: cSNP translation
      14000 <400> SEQUENCE: 850
      14001 Phe Phe Lys Arg Asn Arg His Thr Pro Gly Arg Arg
E--> 14002  1               5                  10        12
      14004 <210> SEQ ID NO: 851
      14005 <211> LENGTH  9
      14006 <212> TYPE: PRT
      14007 <213> ORGANISM: Homo sapiens
      14009 <220> FEATURE:
      14010 <221> NAME/KEY: VARIANT
      14011 <222> LOCATION: (7)...(0)
      14012 <223> OTHER INFORMATION: cSNP translation
      14014 <400> SEQUENCE: 851
      14015 Thr Ile Gln Pro Pro Arg Glu
E--> 14016  1               5          7
      14032 <210> SEQ ID NO: 853
      14033 <211> LENGTH  14
      14034 <212> TYPE: PRT
      14035 <213> ORGANISM: Homo sapiens
      14037 <220> FEATURE:
      14038 <221> NAME/KEY: VARIANT
      14039 <222> LOCATION: (8)...(0)
      14040 <223> OTHER INFORMATION: cSNP translation
      14042 <400> SEQUENCE: 853
      14043 Gly Gly Lys Met Gly Gly Arg Lys Arg Leu Gln Lys
E--> 14044  1               5                  10        12
      14116 <210> SEQ ID NO: 859
      14117 <211> LENGTH: 14
      14118 <212> TYPE: PRT
      14119 <213> ORGANISM: Homo sapiens
      14121 <220> FEATURE:
      14122 <221> NAME/KEY: VARIANT
      14123 <222> LOCATION: (7)...(0)
      14124 <223> OTHER INFORMATION: cSNP translation
      14126 <400> SEQUENCE: 859
      14127 Thr Asp Phe Phe Phe Phe
                                  6
```

Handwritten annotations:

Same
14 listed
12 shown

Same
9 listed
7 shown

14 listed
12 shown

14 listed
6 shown

```
RAW SEQUENCE LISTING                    DATE: 11/24/2000
PATENT APPLICATION:  US/09/472,688A     TIME: 15:33:28

Input Set : A:\ES.txt
Output Set: N:\CRF3\11242000\I472688A.raw

E--> 14128  1                5
     14130 <210> SEQ ID NO: 860
     14131 <211> LENGTH: 14
     14132 <212> TYPE: PRT
     14133 <213> ORGANISM: Homo sapiens
     14135 <220> FEATURE:
     14136 <221> NAME/KEY: VARIANT
     14137 <222> LOCATION: (8)...(0)
     14138 <223> OTHER INFORMATION: cSNP translation
     14140 <400> SEQUENCE: 860
     14141 Gly Ala Gly Ser Val Ser Asp His His Ser Ile Thr Lys
E--> 14142  1                5                        10
     14214 <210> SEQ ID NO: 866
     14215 <211> LENGTH: 14
     14216 <212> TYPE: PRT
     14217 <213> ORGANISM: Homo sapiens
     14219 <220> FEATURE:
     14220 <221> NAME/KEY: VARIANT
     14221 <222> LOCATION: (7)...(0)
     14222 <223> OTHER INFORMATION: cSNP translation
     14224 <400> SEQUENCE: 866
     14225 Asn Phe Ile Leu Ala Cys Pro Arg
E--> 14226  1                5
     14228 <210> SEQ ID NO: 867
     14229 <211> LENGTH: 14
     14230 <212> TYPE: PRT
     14231 <213> ORGANISM: Homo sapiens
     14233 <220> FEATURE:
     14234 <221> NAME/KEY: VARIANT
     14235 <222> LOCATION: (7)...(0)
     14236 <223> OTHER INFORMATION: cSNP translation
     14238 <400> SEQUENCE: 867
     14239 Arg Glu Lys Leu Arg Asn Phe His Phe Ser Met Ser Arg
E--> 14240  1                5                        10
     14256 <210> SEQ ID NO: 869
     14257 <211> LENGTH: 14
     14258 <212> TYPE: PRT
     14259 <213> ORGANISM: Homo sapiens
     14261 <220> FEATURE:
     14262 <221> NAME/KEY: VARIANT
     14263 <222> LOCATION: (7)...(0)
     14264 <223> OTHER INFORMATION: cSNP translation
     14266 <400> SEQUENCE: 869
     14267 Lys Arg Val Ala Gly Gly Leu Arg
E--> 14268  1                5
     14270 <210> SEQ ID NO: 870
     14271 <211> LENGTH: 14
     14272 <212> TYPE: PRT
     14273 <213> ORGANISM: Homo sapiens
```

14 listed
13 shown

14 listed
8 shown

14 listed
13 shown

14 listed
8 shown

14 listed
9 shown

```
RAW SEQUENCE LISTING              DATE: 11/24/2000
PATENT APPLICATION:  US/09/472,688A      TIME: 15:33:28

     Input Set : A:\ES.txt
     Output Set: N:\CRF3\11242000\I472688A.raw

     14275 <220> FEATURE:
     14276 <221> NAME/KEY: VARIANT
     14277 <222> LOCATION: (8)...(0)
     14278 <223> OTHER INFORMATION: cSNP translation
     14280 <400> SEQUENCE: 870
     14281 Gly Lys Arg Val Ala Gly Gly Leu Arg
E--> 14282 1                     5
     14298 <210> SEQ ID NO: 872
     14299 <211> LENGTH: 14
     14300 <212> TYPE: PRT
     14301 <213> ORGANISM: Homo sapiens
     14303 <220> FEATURE:
     14304 <221> NAME/KEY: VARIANT
     14305 <222> LOCATION: (8)...(0)
     14306 <223> OTHER INFORMATION: cSNP translation
     14308 <400> SEQUENCE: 872
     14309 Gln Arg Ser Ile Ser Ala Asp
E--> 14310 1                     5
     14410 <210> SEQ ID NO: 880
     14411 <211> LENGTH: 14
     14412 <212> TYPE: PRT
     14413 <213> ORGANISM: Homo sapiens
     14415 <220> FEATURE:
     14416 <221> NAME/KEY: VARIANT
     14417 <222> LOCATION: (7)...(0)
     14418 <223> OTHER INFORMATION: cSNP translation
     14420 <400> SEQUENCE: 880
     14421 Cys Lys Cys Ser Arg Lys Asp Pro Arg Ser Ala Thr Ala Thr
     14422 1                     5                   10
E--> 14424 15
E--> 14433 2
```

(circled annotations: 9, 7)

→ *14 listed*
7 shown

Extraneous numerals at end of file must be deleted. They are causing an invalid amino acid count for sequence # 880.

F.Y.I.

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY   DATE: 11/24/2000
PATENT APPLICATION: US/09/472,688A   TIME: 15:33:29

Input Set : A:\ES.txt
Output Set: N:\CRF3\11242000\I472688A.raw

```
L:47 M:112 C: (48) String data converted to lower case,
L:64 M:112 C: (48) String data converted to lower case,
L:81 M:112 C: (48) String data converted to lower case,
L:98 M:112 C: (48) String data converted to lower case,
L:115 M:112 C: (48) String data converted to lower case,
L:132 M:112 C: (48) String data converted to lower case,
L:149 M:112 C: (48) String data converted to lower case,
L:166 M:112 C: (48) String data converted to lower case,
L:183 M:112 C: (48) String data converted to lower case,
L:200 M:112 C: (48) String data converted to lower case,
L:217 M:112 C: (48) String data converted to lower case,
L:234 M:112 C: (48) String data converted to lower case,
L:251 M:112 C: (48) String data converted to lower case,
L:268 M:112 C: (48) String data converted to lower case,
L:285 M:112 C: (48) String data converted to lower case,
L:302 M:112 C: (48) String data converted to lower case,
L:319 M:112 C: (48) String data converted to lower case,
L:336 M:112 C: (48) String data converted to lower case,
L:353 M:112 C: (48) String data converted to lower case,
L:370 M:112 C: (48) String data converted to lower case,
L:387 M:112 C: (48) String data converted to lower case,
L:404 M:112 C: (48) String data converted to lower case,
L:421 M:112 C: (48) String data converted to lower case,
L:438 M:112 C: (48) String data converted to lower case,
L:455 M:112 C: (48) String data converted to lower case,
L:472 M:112 C: (48) String data converted to lower case,
L:489 M:112 C: (48) String data converted to lower case,
L:506 M:112 C: (48) String data converted to lower case,
L:523 M:112 C: (48) String data converted to lower case,
L:540 M:112 C: (48) String data converted to lower case,
L:557 M:112 C: (48) String data converted to lower case,
L:574 M:112 C: (48) String data converted to lower case,
L:591 M:112 C: (48) String data converted to lower case,
L:608 M:112 C: (48) String data converted to lower case,
L:625 M:112 C: (48) String data converted to lower case,
L:642 M:112 C: (48) String data converted to lower case,
L:659 M:112 C: (48) String data converted to lower case,
L:676 M:112 C: (48) String data converted to lower case,
L:693 M:112 C: (48) String data converted to lower case,
L:710 M:112 C: (48) String data converted to lower case,
L:727 M:112 C: (48) String data converted to lower case,
L:744 M:112 C: (48) String data converted to lower case,
L:761 M:112 C: (48) String data converted to lower case,
L:778 M:112 C: (48) String data converted to lower case,
L:795 M:112 C: (48) String data converted to lower case,
L:812 M:112 C: (48) String data converted to lower case,
L:829 M:112 C: (48) String data converted to lower case,
L:846 M:112 C: (48) String data converted to lower case,
```

VERIFICATION SUMMARY   DATE: 11/24/2000
PATENT APPLICATION: US/09/472,688A   TIME: 15:33:29

Input Set : A:\ES.txt
Output Set: N:\CRF3\11242000\I472688A.raw

L:863 M:112 C: (48) String data converted to lower case,
L:880 M:112 C: (48) String data converted to lower case,
L:6357 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:370
L:6959 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:404
L:11452 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:1 SEQ:668
L:12868 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:7 SEQ:769
L:12966 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:1 SEQ:776
L:13805 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:836
L:14002 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:12 SEQ:850
L:14016 M:252 E: No. of Seq. differs, <211>LENGTH:Input:9 Found:7 SEQ:851
L:14044 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:12 SEQ:853
L:14128 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:6 SEQ:859
L:14142 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:13 SEQ:860
L:14226 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:8 SEQ:866
L:14240 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:13 SEQ:867
L:14268 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:8 SEQ:869
L:14282 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:9 SEQ:870
L:14310 M:252 E: No. of Seq. differs, <211>LENGTH:Input:14 Found:7 SEQ:872
L:14424 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:880
M:332 Repeated in SeqNo=880